

Benefits from the Implementation of the Climate Module of the Sustainable Agriculture Network (SAN)

The SAN Climate Module was launched in 2011 and since then, more than 260 coffee producers in Guatemala, Honduras, El Salvador and Costa Rica have implemented its principles for climate-friendly agriculture.

During the implementation of these climate change adaptation and mitigation practices on Rainforest Alliance Certified™ coffee farms, important environmental and even economic benefits have been observed. Below we present some of the improvements found on farms verified under the module.



*Cooperative Nuevo Sendero R.L.,
Nueva Santa Rosa, Guatemala*

I. Differences in production between worm composting and traditional composting

- ✓ During traditional composting the organic material is not turned or mixed enough, which produces methane (CH₄) emissions. This does not happen with worm composting, the alternative proposed in the Climate Module used by verified farms.
- ✓ The preparation of traditional compost makes ammonia more available, which in turn increases emissions of nitrogen oxide (N₂O), a greenhouse gas. This is prevented with worm composting.
- ✓ Worm compost production requires less raw material and labor.
- ✓ Worm compost yields lower concentrations of nitrogen in the form of ammonia and higher nitrogen in the form of nitrates.



II. Cost of worm compost preparation

- ✓ The cost to produce one quintal of traditional compost in Guatemala varies from Q38.00 to Q45.00 (US\$4.75 to \$5.63).
- ✓ The cost to produce one quintal of worm compost for the Cooperative Nuevo Sendero, R.L. is Q13.00 (US\$1.63)—less than one-third the cost of traditional compost.
- ✓ Traditional compost tends to have higher acidity values (pH) and lower concentrations of nutrients compared to compost made using worms.



El Platanillo Farm, San Rafael Pie de la Cuesta, San Marcos in Guatemala

The first farm to implement practices for mitigation and adaptation to climate change and obtain Climate Module verification in 2011.



III. Reduction of CO₂ emissions

- ✓ A savings of 38,327 liters of fuel per year was documented in the wet milling process.
- ✓ The farm emits 1,357.60 kilograms of carbon dioxide less than one with a traditional mill.
- ✓ By burying the fertilizers instead of applying them on the soil, El Platanillo Farm prevents nitrous oxide emissions.
- ✓ It has also directly reduced carbon dioxide emissions to the atmosphere by an amount equivalent to the fuel consumption of 49 vehicles for a year.



IV. Reduction of water consumption

- ✓ El Platanillo Farm saves 15,080,173 liters of water per year, equivalent to the water consumption of 20,658 persons for a year



To learn more about the Sustainable Agriculture Network's Climate Module, visit:

<http://sanstandards.org/sitio/subsections/display/51>